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IBM to provide next Met Office supercomputer

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The Met Office has signed a contract with IBM for its next-generation supercomputer that will underpin its weather forecast and climate research programmes until 2013.

The extra computing power means the Met Office can achieve even more-accurate and detailed short-range weather forecasts through high-resolution computer simulations. It will allow greater use of *ensembles* — multiple simultaneous forecasts — which means it will be possible to give earlier warning of low probability, high-impact weather. The system will also be used to progress research on climate change and its impacts on society and the economy.

John Hirst, Met Office Chief Executive said: "In a world where the effect of extreme weather events is becoming more severe and the potential impact of global warming is becoming ever more apparent, the Met Office plays an increasingly vital role in researching and forecasting these events. The new supercomputer is an important step in delivering our strategic targets."

A discrete part of the system will be used for collaborative scientific research supported by both the Natural Environment Research Council and Met Office.

The new IBM supercomputer is projected to become the second most powerful system in the UK and within the top 20 most powerful systems in the world (see note 2 for details). It is capable of a peak performance of 125 trillion floating point operations per second. By 2011, the total system is anticipated to have a total peak performance approaching 1 PetaFlop — equivalent to over 100,000 PCs and over 30 times more powerful than what is in place today. As part of the agreement, IBM will also provide a mid-life system upgrade, support and maintenance services during the five-year contract.

Defence Minister, Derek Twigg MP, said: "The Met Office provides essential services to the nation, saving lives and protecting property through its weather forecasts and climate advice. I am very pleased to approve the replacement of the Met Office's supercomputer, which will enable it to take advantage of latest technology and thereby deliver enhanced services to the public and both Government and commercial customers."

Dave Kay, IBM Vice President Systems and Technology Group, said: "It is testament to the performance and reliability of IBM's System p — the world's leading platform for weather forecasting — and also a tribute to IBM's scientists and researchers, who have helped combine meteorology with computer science, that we have been selected to help the Met Office provide critical information, 24 hours a day."

Notes:

1. More information about High Performance Computing from IBM

2. As defined by where this new supercomputer would appear in the Top 500 Supercomputer list, published in June 2008.

3. Initially the system will have computing power roughly equivalent to 20,000 high-end PCs and is armed with 13 TB of memory and over 500 TB of disk storage

4. A four-machine solution will be installed with a main production system; an identical research/production back-up system; a separate system for facilitating external collaborations and a minimal system for test purposes.

For further information:

Met Office Press Office +44 (0)1392 886655
E-mail: pressoffice@metoffice.gov.uk

Met Office Customer Centre 0870 900 0100
If you're outside the UK +44 (0)1392 885680